

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method of constructing a representation of the geographical distribution of traffic for a cellular radio network, the method comprising the steps of:

dividing each cell of said cellular network into a set of areas using information on handovers boundaries obtained from said cellular network;

determining a traffic value for each of said areas;

determining a representation of the geographical distribution of the traffic from said traffic values; and

outputting the determined representation,

wherein the traffic value of an area depends on an outgoing handover probability $(\alpha_{12}, \alpha_{22})$ from said area to a neighboring cell.

2. (canceled).

3. (previously presented): A method according to claim 1, wherein said handover probabilities are computed conjointly with said traffic values by a constraint optimization method.

4. (currently amended): A method according to claim 1, wherein the ~~step of dividing of~~ each cell ~~comprises~~ is made up of the following substeps:

acquiring incoming handover boundaries from best server maps provided by a management system, and

computing outgoing handover boundaries from said incoming handover boundaries,
dividing each cell of said cellular network into a set of areas using the outgoing handover boundaries, wherein said outgoing handover boundaries forming form the boundaries of said areas.

5. (currently amended): A method according to claim 1, wherein the following constraint is satisfied for each cell: addition of all the traffic values (λ_k) of the areas (A_k) comprised in a cell (i) is equal to the traffic value of the cell (i).

6. (currently amended): A method according to claim 1, wherein a distinction is made between two types of areas contained in a cell C_i :

areas near a cell C_i , for which the probability a_1 that a call will be subject to an outgoing handover is relatively high,

other areas of the cell C_i , for which the probability a_2 that a call will be subject to an outgoing handover is relatively low.

7. (currently amended): A computer planning device for constructing a representation of the geographical distribution of traffic for a cellular radio network, the device comprising:

a dividing ~~module~~ instruction for dividing each cell of said cellular network into a set of areas using information on handovers boundaries obtained from said cellular network;

a first determining ~~module-instruction for~~ determining a traffic value for each of said areas;

a second determining ~~module-instruction for~~ determining a representation of the geographical distribution of the traffic from said traffic values; and

an outputting ~~module-instruction for~~ outputting the determined representation to a management unit,

wherein the traffic value of an area depends on an outgoing handover probability ~~(ϵ_{t1} , ϵ_{t2})~~ from said area to a neighboring cell.

8. (previously presented): The method according to claim 1, wherein said outputting comprises outputting the determined representation to a management unit to generate an alarm or to take corrective measures when needed.

9. (currently amended): The computer planning device according to claim 7, wherein said outputting ~~module-instruction~~ outputs the determined representation to a management unit to generate an alarm or to take corrective measures when needed.

10. (currently amended): A mobile telecommunications network split into a plurality of cells, the network comprising:

a plurality of base stations, wherein each of the base stations are allocated to a respective cell within the plurality of cells;

a management unit for managing the network;

a planning tool for constructing a representation of the geographical distribution of traffic for a cellular radio network, wherein the planning tool divides each cell of said cellular network into a set of areas using information on handovers boundaries obtained from said cellular network, determines a traffic value for each of said areas, and determines a representation of the geographical distribution of the traffic from said traffic values; and

a storage unit storing the determined representation for determining whether corrective measures are needed with respect to allocation of the plurality of base stations to respective cells,

wherein the traffic value of an area depends on an outgoing handover probability (α_{1x}) from said area to a neighboring cell.